Laser Focus World – April 2012

Vibration isolation table from Minus K achieves a 0.5 Hz natural frequency

Posted by Lee Mather
Associate Editor

PRESS RELEASE

New MK52 Negative-Stiffness Optical Vibration Isolation Table

Minus K Technology, a leading manufacturer of vibration isolation products has partnered with Kinetic Systems, Inc. in designing a new, versatile, ultra-low natural frequency optical table isolation system.

The MK52 negative-stiffness optical table achieves 0.5 Hz or lower vertical and horizontal natural frequencies without limiting its ability to support static loads. When adjusted to a 0.5 Hz natural frequency, the MK52 achieves 93 percent isolation efficiency at 2 Hz, 99 percent at 5 Hz, and 99.7% percent at 10 Hz.

The MK52 negative-stiffness optical vibration isolation table achieves vertical and horizontal natural frequencies of 0.5 Hz or lower without limiting its ability to support static loads. At a natural frequency of 0.5 Hz, it provides isolation efficiencies of 93% at 2 Hz, 99% at 5 Hz, and 99.7% at 10 Hz.

The MK52 Optical Vibration Isolation Table can be configured for a wide variety of locations and applications - wherever external vibrations can adversely affect the operation of sensitive equipment. Ultra-low natural frequencies, high internal structural frequencies, and excellent vertical and horizontal isolation efficiencies make the system well-suited to applications such as analytical balances, cell injection, confocal microscopes, patch clamping, optical microscopes, wafer probing, sensor calibration and laser applications, in fields such as semiconductor processing, telecommunications, aerospace engineering and medical research.

The MK52 is also ideal for applications requiring high resolution, such as Raman spectroscopy, atomic force microscopy (AFM), AFM-Raman integration, and micro-hardness testing.

The MK52 is available in table sizes up to 4' x 8' with gross load capacities up to 2,000 pounds (909Kg) (larger optical table sizes will be considered). Tables are constructed with a 3/16" thick ferromagnetic stainless steel top skin, 3/16" thick carbon steel bottom skin, and plated-steel precision honeycomb core. Customization options include guard rails, padded armrests, overhead equipment shelves, monitor stands, non-isolated shelves for supporting equipment off the tabletop, seismic restraints, auxiliary work surfaces, retractable casters, Faraday Cages, and tabletop enclosures to protect against harsh manufacturing environments.

About Minus K Technology, Inc.

Minus KR Technology, Inc. was founded in 1993 to design, manufacture and market state-of-the-art vibration isolation products based on the company's patented negative-stiffness-mechanism technology. Minus K products are used in a broad spectrum of applications including nanotechnology, biological sciences, semiconductors, materials research, zero-g simulation of spacecraft, and high-end audio. The company is an OEM supplier to leading manufacturers of scanning probe microscopes, micro-hardness testers and other vibration-sensitive instruments and equipment. Minus K customers include private companies and more than 200 leading universities and government laboratories in 35 countries.

Dr. David L. Platus is the inventor of negative-stiffness mechanism vibration isolation systems, and President and Founder of Minus K Technology, Inc. (www.minusk.com). He earned a B.S. and a Ph.D. in Engineering from UCLA, and a diploma from the Oak Ridge School of (Nuclear) Reactor Technology. Prior to founding Minus K Technology he worked in the nuclear, aerospace and defense industries conducting and directing analysis and design projects in structural-mechanical systems. He became an independent consultant in 1988. Dr. Platus holds over 20 patents related to shock and vibration isolation.

For more information contact Steve Varma, Minus K Technology, Inc.; 460 South Hindry Ave., Unit C, Inglewood, CA 90301; Phone 310-348-9656; Fax 310-348-9638; email stevev@minusk.com; www.minusk.com.